

## Title (en)

REFRACTORY AND METHOD FOR PRODUCTION THEREOF, AND RAW MATERIAL FOR REFRACTORY

## Title (de)

FEUERFESTES MATERIAL, HERSTELLUNGSVERFAHREN DAFÜR UND ROHSTOFF FÜR FEUERFESTES MATERIAL

## Title (fr)

RÉFRACTAIRE ET PROCÉDÉ DE FABRICATION IDOINE, ET MATIÈRE PREMIÈRE POUR RÉFRACTAIRE

## Publication

**EP 1873128 A4 20110427 (EN)**

## Application

**EP 06745476 A 20060419**

## Priority

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## Abstract (en)

[origin: EP1873128A1] A carbon-containing refractory is provided, which can improve the thermal shock resistance, the abrasion resistance, and the corrosion resistance without degrading the oxidation resistance. In a carbon-containing refractory composed of a refractory aggregate, a carbon based raw material, and a carbon bond connecting between the refractory aggregate or the carbon based raw material, transition metal-containing nanoparticles having particle diameters of 1,000 nm or less and containing a transition metal are contained in the above-described carbon bond while being dispersed. When the carbon-containing refractory is heat-treated, flexible structures of carbon fiber-shaped textures having diameters of 50 nm or less are formed in the inside of a carbon bond and, thereby, an increase in strength, a reduction in modulus of elasticity, and a reduction in thermal expansion coefficient are facilitated. Therefore, a carbon-containing refractory exhibiting high thermal shock resistance, high abrasion resistance, and high corrosion resistance are provided.

## IPC 8 full level

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## Citation (search report)

- [X] US 2004106509 A1 20040603 - OCHIAI TSUNEMI [JP], et al
- [X] DATABASE WPI Week 198425, Derwent World Patents Index; AN 1984-156249, XP002629026

## Citation (examination)

- DE 19954893 A1 20010517 - REFRATECHNIK HOLDING GMBH & CO [DE]
- DATABASE WPI Week 198115, Derwent World Patents Index; AN 1981-26491D

## Cited by

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